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FAIRCHILD SEMICONDUCTOR®

Jameco Part Number 102998 (W06G)

W005G - W10G

Features

- Surge overload rating: 50 amperes peak.
- Glass passivated junction.
- Ideal for printed circuit board.
- Reliable low cost construction technique results in inexpensive product.
- UL certified, UL #E96005.

WOB

Bridge Rectifiers (Glass Passivated)

Absolute Maximum Ratings*

T_A = 25°C unless otherwise noted

Symbol	Parameter	Value							Units
		005G	01G	02G	04G	06G	08G	10G	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
V_{RMS}	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
V_R	DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, @ T_A = 50°C	1.5							A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	50							A
T_{stg}	Storage Temperature Range	-55 to +150							°C
T_J	Operating Junction Temperature	-55 to +150							°C

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value	Units
P_D	Power Dissipation	3.47	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient,* per leg	36	°C/W
$R_{\theta JL}$	Thermal Resistance, Junction to Lead,* per leg	11	°C/W

*Device mounted on PCB with 0.375" (9.5 mm) lead length.

Electrical Characteristics

T_A = 25°C unless otherwise noted

Symbol	Parameter	Device	Units
V_F	Forward Voltage, per bridge @ 1.0 A	1.0	V
I_R	Reverse Current, total bridge @ rated V_R T_A = 25°C T_A = 125°C	 5.0 500	 µA µA
	I^2t rating for fusing t < 8.3 ms	10	A^2s
C_T	Total Capacitance, per leg V_R = 4.0 V, f = 1.0 MHz	15	pF

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Typical Characteristics

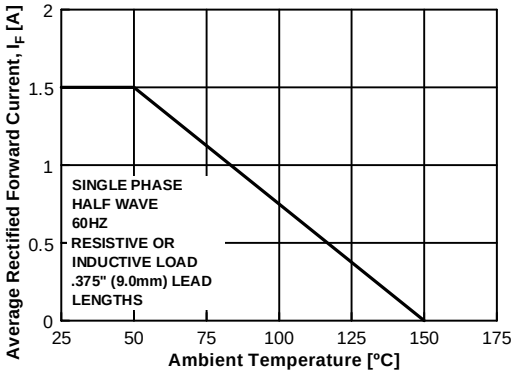

Figure 1. Forward Current Derating Curve

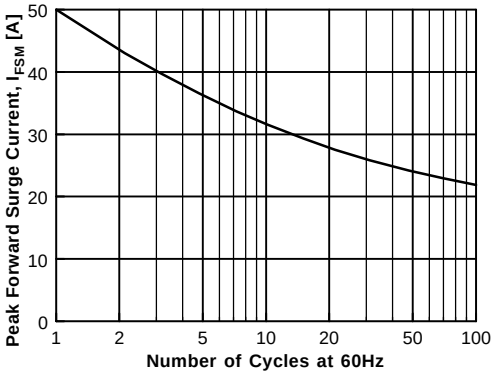

Figure 2. Non-Repetitive Surge Current

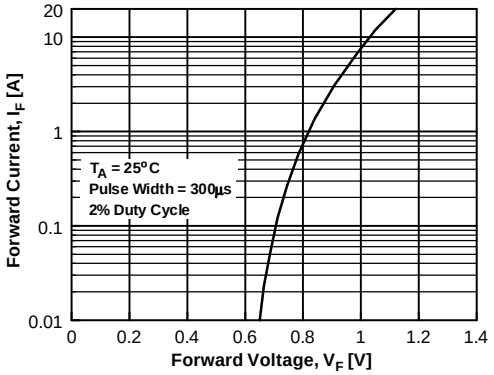

Figure 3. Forward Voltage Characteristics

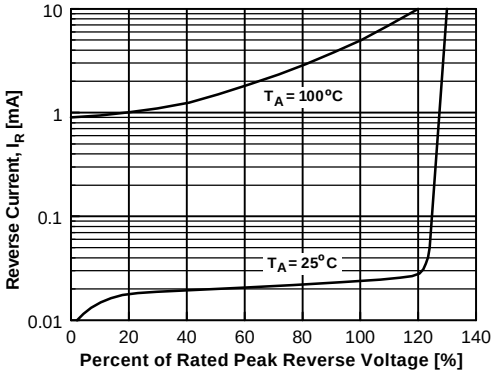

Figure 4. Reverse Current vs Reverse Voltage

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DenseTrench™	GTO™	Power247™	SuperSOT™-6	
DOME™	HiSeC™	PowerTrench®	SuperSOT™-8	
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